

REMARKS/ARGUMENTS

In response to the objection to the specification, suitable headings have been inserted where appropriate. In addition, the other informalities have been corrected and minor changes have been made.

Claims 1-27 have been canceled and rewritten as new Claims 28-54 in such a manner as to overcome the objections under 35 U.S.C. 112.

Regarding the rejection of Claims 1-6, 8 and 13 (now Claims 28-33, 35 and 40) patentably define over Muramatsu et al '000 for the reasons set forth below.

Muramatsu et al discloses a scanning probe microscope in which a cantilever probe with a first resonance frequency is closely arranged on a surface of a measurement object or sample. The cantilever probe or raster probe is relatively scanned two-dimensionally on the surface of the sample by using a three-dimensional fine movement element thereby observing the surface shape or surface physical properties of the sample. A sensor cantilever with a second resonance frequency different from the first resonance frequency detects displacement of the cantilever probe during scanning movement between the cantilever probe and the surface of the sample. The sensor cantilever is disposed spaced apart but within touching distance from the cantilever probe so that displacement of the cantilever probe is transmitted to the sensor cantilever by contact between the sensor cantilever and the cantilever probe. Oscillating means are provided for oscillating either or both of the cantilever probe and the sensor cantilever. Therefore, according to the Muramatsu et al document only one cantilever probe oscillation at a time is excited. Accordingly in each case only one measuring signal characterizing the deformation of the cantilever probe in an oscillation excitation is detected, recorded and analyzed.

Unlike the known scanning probe microscope of Muramatsu et al, the raster probe microscope according to the invention comprises an arrangement or a device for exciting two raster-probe oscillations: a vertical first raster-probe oscillation as well as a vertical and/or horizontal second raster-probe oscillation. Additionally or alternatively such arrangement may be used for exciting two sample oscillations: a vertical first sample oscillation as well as a vertical and/or horizontal second sample oscillation. Such a claimed arrangement is neither disclosed in the Muramatsu et al document nor rendered obvious.

Additionally the raster probe microscope according to one form of the invention comprises an arrangement or a device for detecting a vertical and/or lateral deformation of

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the raster probe in a vertical first as well as in a vertical and/or horizontal second oscillation excitation and for recording and analyzing of two measuring signals characterizing the deformation of the raster probe in a vertical first as well as in a vertical and/or a horizontal second oscillation excitation of the raster probe and/or the sample. Again such an arrangement is not disclosed or suggested by Muramatsu et al.

For the reasons set forth above, it is submitted that the claims are now in condition for allowance and such action is solicited. However if outstanding issues remain, it is requested that the Examiner telephone the undersigned at 260-460-1692.

Respectfully submitted,

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Name of Registered Representative

Signature

February 16, 2004

Date